Agency Costs of Board Connections and Director Retention: Evidence from UK Takeovers

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Abstract:

Purpose – The purpose of this paper is to investigate whether *ex-ante* board connections and director retention result in agency costs to target company shareholders in the form of reduced payment in mergers and acquisitions transaction.

Design/methodology/approach – We employ detailed data of *ex-ante* board connection and director retention in the mergers and acquisition in the UK from 1999-2015. *Ex-ante* board connections are measured as proportion of target & acquirer companies' directors worked on the same board at any time prior to the takeover, while director retention is measured as proportion of target companies' directors remains on board after the takeover is completed. For mergers and acquisition payment characteristics, we examine takeover premium, cash payment percentage and offer price adjustment.

Findings – We find that *ex-ante* board connections and director retention lead to reduced offer prices and lower proportions of cash payment. Notably, when there is no connection and target directors are not retained, we find that the bidding companies increase their final offer by £14m more than in other scenarios. We also document strong evidence that *ex-ante* board connections lead to a higher probability of director retention.

Originality/value – Our paper highlights that *ex-ante* board connections and director retention will lead to a significant cost on target company shareholders. We recommend that a more detailed set of information on *ex-ante* board connections and intended target board retention should be disclosed.

Keywords: Corporate Governance; Mergers and Acquisitions; Agency Costs; Board Connections; Director Retention

Paper type: research paper

1. INTRODUCTION

Directors of target companies are subject to a conflict of interest arising from *ex-ante* connections to the bidder (Wulf, 2004; Cai and Sevilir, 2012; Ishii and Xuan, 2014; Qiu et al., 2014; Guo et al., 2015; Schmidt, 2015). This conflict of interest may result in agency costs to the detriment of target company shareholders. During the takeover process, target directors may pursue personal benefits rather than target shareholder wealth in the takeover process (Ishii and Xuan, 2014; Qiu et al., 2014). Target directors may be concerned to ensure they are retained after the takeover whilst bidders may seek to exploit personal connections to gain favourable acquisition terms (Qiu *et al*., 2014).[i] In both cases, target company shareholders are vulnerable to reduced takeover terms compared to arm's length contracting. Any loss of value to the target company shareholders which arises solely due to the actions of their directors can be interpreted as a form of agency cost. The purpose of our paper is to examine the agency costs arising from *ex-ante* board connections and target director retention. Our empirical approach is to examine the impact of board connection and retention variables on the price paid by the bidder in takeovers. In particular, we examine the impact of a range of board connection and retention variables on the payment characteristics in UK mergers and acquisitions (M&A).

Target directors have a pecuniary incentive to 'cooperate' with the bidder if they may be retained and this incentive may result in a specific agency cost - reduced terms for target company shareholders in the takeover process. A completed takeover may result in the departure of target directors, causing a significant loss to the target director both financially and in terms of their personal investment in human capital. Considering the potential negative consequences for target directors, target directors may bargain vigorously for personal interests during takeover negotiation. An example from our sample is provided by Dixons acquisition of Carphone Warehouse in 2014. Carphone Warehouse CEO Andrew Harrison was retained as deputy CEO in the combined company. His annual cash compensation (salary plus bonus) increased from £656,000 (when he was with Carphone Warehouse in 2013) to £1,315,000 (when he was with the acquirer in 2015).

Since *ex-ante* connections provide a channel for negotiation between bidders and targets, board connections and retention of target directors may have positive effects on shareholder wealth for either or both parties. Recent research indicates that the probability of being retained increases if directors have an *ex-ante* connection to the board of the bidding company (Renneboog and Zhao, 2014; Ishii and Xuan, 2014). Directors may be retained in order to preserve value associated with their knowledge and experience of the target. Such information would be expected to enhance shareholder value for bidder shareholders after the takeover

particularly if information asymmetry regarding target activities is reduced. Equally, such information may allow the bidder to justify a higher valuation of the target which would benefit the target company shareholders in particular.

In addition, M&A are a principal form of protection for minority shareholders in the UK and elsewhere. That protection is compromised if board members do not negotiate in the interests of the target shareholders in the takeover process. The incentive to negotiate may be lessened if the target directors have *ex-ante* connections to the bidder and this is particularly true if they are then retained after the takeover. In an extreme example, a target director may be able to convert a hostile takeover into a friendly one. The lost value for the target shareholders can be interpreted as a form of agency cost.

Previous studies have examined the role of connections between targets and bidders' CEOs in U.S. M&A. In the US, decision-making lies more formally with the CEO. According to the Spencer Stuart U.S Board Index® 2013, 55% of CEOs are also the chairman of their U.S companies. In the UK, the role of non-executive directors is emphasised, and CEOs are less central to decision-making. For instance, CEO duality is rare in the UK, and UK CEOs are paid far less compared with their US counterparts (Murphy, 2013). There are also important differences between the U.S. and U.K. takeover regimes. In the U.S., state laws, corporate bylaws and anti-takeover provisions protect CEOs from dismissal and allow managerial entrenchment (e.g. Baysinger and Butler, 1985; Bebchuk *et al.*, 2009). Takeover defences, disallowed in the UK, are used to protect the CEO and their board from takeovers. US non-executive directors are less central to decision-making and are often accused of lacking independence (Shivdasani and Yermack, 1999). This emphasis on independence in UK boards may have a negative effect on target shareholder wealth in the takeover process. Whilst internal independence between the insiders and outsiders on a board is clearly desirable, there has been little consideration of the role of external independence such as connections to other, perhaps competing, firms. Bidders may be able to exploit any external lack of independence in the form of board connections. This motivates our interest in the impact of not only connections between CEOs but with other members of the board as well.

In short, board connections and the possibility of retention may make target firm directors better motivated to accept deals. Target firm directors may take advantage of their position for personal benefit at the cost of target firm shareholders. Such behaviour may be considered both unethical and manifest in lower takeover premiums and lower levels of cash payment. Ultimately, board connections give rise to a conflict of interest between target directors' fiduciary duty to shareholders and their personal benefits from retention. This phenomenon can

be observed by examining the impact of board connections and retention on payment characteristics in M&A.

Our framework considers that board connections and director retention can be exploited to the detriment of target shareholder wealth. Initially, we examine how payment characteristics are influenced by board connections and director retention. We then examine four scenarios which indicate the joint effect of our explanatory variables on payment characteristics. These are (1) there is an *ex-ante* connection between members of the board of the target and the bidder, and at least one target director is retained after the takeover; (2) there is an *ex-ante* connection and no retention of target directors; (3) no *ex-ante* connection between the bidder and the target boards but at least one member of the target board is retained; (4) no *ex-ante* connection and no directors of the target are retained. Each of these scenarios has different implications for the bargaining between bidders and targets. Here, we are concerned to examine whether target company shareholders are protected from agency costs when connections and/or retention are present. We complete our primary analysis with a test of the probability that *ex-ante* connections will result in retention.

To test our view, we collect a sample of UK mergers and acquisitions for the period 1999 to 2015. We consider board connections and retention both at board level (such as the proportion of directors retained) and individual level (such as specific connections between target and bidder CEOs). The transaction characteristics we are interested in are the takeover premium, the final bid adjustment and the percentage of the bid which is in cash. Offer price adjustments by bidding firms are rarely examined in the literature and are a useful proxy for bargain power and incentives during negotiation process.

Our main findings are as follows. We find that if there is an *ex-ante* board connection or a target director is retained then the percentage change in final offer prices is lower compared to the initial offer price. We also identify that proportions of bids paid in cash are lower when a board connection is observed, or a director is retained. With respect to retention, we find that target directors are more likely to remain on the combined board if they have an *ex-ante* connection with the board of the bidding firm. Finally, the results of tests of the preferred scenario for target shareholders indicate that final offer prices and the percentage of the bid paid in cash are higher when there is no connection and directors are not retained. Taken together our findings indicate an agency cost to target company shareholders when target directors have an *ex-ante* board connection or target directors are retained. Our findings also echo the growing literature of directors' opportunistic behaviours in merger and acquisition (e.g. Anagnostopoulou and Tsekrekos, 2015) and the impact of directors' connections on firm

value (e.g. Kim, 2005; Hsu and Wu, 2014). We discuss the implications of these findings in later sections.

To the best of our knowledge, our study is the first to investigate the impact of two distinctive board relations during merger and acquisition: *ex-ante* board connections when takeover is announced and target director retention when the takeover is completed. The most similar study in a UK context is conducted by Renneboog and Zhao (2014) who examine directors' networks in the takeover process and find that better connected target and bidder boards affect the characteristics of takeover deals. Deals are more likely to be completed and negotiations are shorter. We broaden their study by examining specific details of payment characteristics and a wider set of connection and retention variables. Secondly, we also extend the literature by examining the joint effect of board connections and director retention through the lens of agency theory and investor protection. Thirdly, we extend Qiu *et al*. (2014)'s study of CEO retention to retention of all target directors. In addition, our paper provides new evidence of mergers and acquisition motivation driven by director retention. Prior literature addresses incentives for mergers and acquisition from controlling shareholders (e.g. Thraya, 2015) and managerial overconfidence (e.g. Pan *et al*., 2006).

The rest of this paper is organized as follows. In the next section, we review the extant literature and then we present our hypotheses in the third section. We explain the research methods employed in the fourth section and then proceed to describe the sources of our data. We present our main findings and robustness checks in the sixth section. We then provide a discussion of the empirical results and the implications for takeover regulation. The final section is a conclusion.

2. LITERATURE REVIEW

2.1 Board connections in M&A

Directors' networks within boards (e.g. Subrahmanyam, 2008; Hoitash, 2011) and outside the corporation (e.g. Bona-Sánchez *et al*., 2014; Lu *et al*., 2016) have drawn attention from researchers. In particular, there is a growing literature investigating board connections and corporate financial decisions (e.g. Bizjak *et al.,* 2006; Hwang and Kim, 2009; Renneboog and Zhao, 2014). Directors' networks have been shown to be relevant to company value and decision-making in a number of studies. Ishii and Xuan (2014) study social ties between directors of bidder and target firms. They show that cross-firm social connections between bidder and target firm directors have a significant negative effect on abnormal returns to the acquirer firm. In their view social ties between bidder and target firm directors lead to poor

merger and acquisition decisions. By looking at target directors' networks, Stuart and Yim (2010) find that listed firms are more likely to become targets if their directors have previous private equity deal experience. Huang *et al*. (2014) examine acquiring directors' networks and document that acquirer firm directors with investment bank experience are more likely to make better deals, in terms of paying lower takeover premiums, advisory fees and enjoying superior long-run performance. Examining the board connections within board, Schmidt (2015) finds that friendship or close relations among bidding firm directors may not be in the interests of bidding firm shareholders.

Another subset of literature examines bidder and target firm board connections directly. By employing a large sample of US data from 1996-2008, Cai and Sevilir (2012) document that connections between bidder and target boards in the takeover process result in lower takeover premiums and higher cumulative abnormal returns (hereafter CAR) for bidder firms. Guo *et al*. (2015) also employ US data and document that target firms will have a lower CAR, if the target and bidder have *ex-ante* board connections. Their findings also indicate that connected merger and acquisition deals result in lower takeover premium payments. Renneboog and Zhao (2014) explore board connections in merger and acquisitions by using UK data from 1995-2012. In their study connected boards increase the likelihood of deal completion and shorten the time required to reach agreement. They also note that the cash portion of overall payments is lower if boards are connected. However, their evidence suggests that markets do not recognise *ex-ante* board connections since abnormal returns at announcement are similar for boards with no connections.

There are several reasons why board connections may affect pay characteristics in M&A. First, a board connection may lead to an improved channel of communication during the bid (Cai and Sevilir, 2012). Bidding firms which have an *ex-ante* board connection with target firms may be more likely to engage in regular communication and in a friendly manner. Empirical evidence indicates that friendly takeovers often have lower premiums and lower short-term wealth effects for target firms, thus benefiting bidding company shareholders (Goergen and Renneboog, 2004). Secondly, board connections may also lead to reduced information asymmetry between target and bidding firms.

The role of information asymmetry in M&A is highlighted by Croci *et al*. (2012), who argue that acquiring company managers may offer a higher premium for the target if they possess favourable information. Bidding for the wrong target due to information asymmetry is one of the main causes of value-destroying M&A deals (Beitel *et al.*, 2004) whilst bidding firms with a board connection (i.e. directors of the acquirer serving on the board of the target firm) are

more likely to have good information about the target firm. Renneboog and Zhao (2014) argue that board connections may resolve information asymmetry between the bidder and the target allowing acquirers to successfully complete deals in good time. On the other hand, the acquirer firm may be able to take advantage of information from target board members to improve the terms of the deal (i.e. to lower the takeover premium and level of cash payment). Reduced takeover premiums are bad news for target shareholders. In summary, there are two main strands of arguments identified in the preceding literature on board connections: 1) board connections improve communication channels between bidder and target boards; and 2) board connections reduce the information asymmetry between target and acquirer firms.

2.2 Board retention in M&A

There is also a growing literature on target directors' next position following the completed deal. Studies document that target directors (including CEOs) may experience negative outcomes after the takeover is completed. According to Agrawal and Walking (1994), target directors find it difficult to land another directorship. Due to the negative consequences for target firm directors if the deal is completed (i.e. being unemployed), a literature has developed which examines retention of target directors. Agency theory provides a useful framework to study the effect of board connections in M&A. From an agency perspective, target CEOs may bargain for private benefits at a cost to target shareholders during M&A (e.g. Bebchuk and Fried, 2003). In an early paper, Wulf (2004) identifies that target CEOs will accept a lower takeover premium if offered an important role in the combined firm. However, this early study is constrained by a small and highly specific sample (40 observations for US "mergers of equals" deal form 1991-1999). More recently, Qiu *et al*. (2014) collect a large US data from 1994 to 2010. They find that takeover premiums are negatively related to target CEO retention. Furthermore, target CEO retention in a senior role in the combined firm, including CEO, CFO or COO, is associated with an even lower takeover premium compared with other retained board positions (e.g. non-executive director). Target firm stock return at announcement is also lower if target CEOs are retained. Qui *et al.* (2014) conclude that results from their analysis strongly support the conflict of interest hypothesis indicating that target CEOs bargain vigorously for private benefits during the takeover process.

However, not all evidence supports the argument that target directors trade takeover premium for retention. Bargeron *et al*. (2010) use US data from 1994-2006 and find that CEO retention is not associated with a lower takeover premium. They find that a target CEO is more likely to stay if he or she has skills and knowledge that bidder executives do not have. Acquirers are

also found to be willing to pay a higher premium for target firms if the target CEO is retained in a sample of private equity acquisitions (Bargeron *et al*., 2017).

3. HYPOTHESIS DEVELOPMENT

3.1 Takeover premium

Our first hypothesis looks at the most explicit takeover characteristic, the takeover premium. It captures the difference between the offer price and the market price of target firm. With respect to board connections, we argue that *ex-ante* connections will favour the bidder and result in costs to the target company shareholders. One explanation is that a target director has an incentive to bargain less vigorously if they have a connection to the bidding firm. From the perspective of a target company shareholder this means reduced protection from *ex-ante* agency costs. An alternative explanation is that *ex-ante* board connections will reduce information asymmetry between acquirer firm board and target firm (e.g. Renneboog and Zhao, 2014). *Ex-ante* board connections will make bidder firm directors better-informed about the target firm which will reduce the incidence and risk of overpayment. Hence, bidder firms are likely to pay less for the target. If *ex-ante* connections with the target give bidders an advantage in terms of information asymmetry, it is likely to manifest itself in the payment characteristics. Specifically, bidders with *ex-ante* connections will pay lower takeover premiums.

As far as the target director retention is concerned, we argue that target directors may trade (or hope to trade) takeover premium for retention. Again, target firm directors may bargain less vigorously if they may be retained. Hence, bidders are more likely to pay less in terms of takeover premiums. Such a prediction is also supported by some US literature (e.g. Wulf, 2004; Qiu *et al.*, 2014). In summary, our first hypothesis is listed below.

Hypothesis 1. Ex-ante board connections (director retention) will result in a lower takeover premium.

3.2 Offer price adjustment

Our second hypothesis is related with a pay characteristic which has received relatively little consideration, the offer price adjustment i.e. the adjustment to the offer after the initial bid. During the price negotiation period, bidders may review their initial offer price due, for example, to bargaining with the target (Deloitte, 2016). Therefore, we argue that the offer price adjustment is a reasonable proxy for the bargain outcome from target directors. A large adjustment to the initial offer price may indicate that target directors negotiate more aggressively on behalf of the target shareholders. Boards with *ex-ante* connections to the bidder,

on the other hand, may not do as good a job of negotiating the price during the merger process. Therefore, we predict that the change in the final offer will be lower if target directors have *ex-ante* connections to the bidder. Considering that target directors may bargain for retention, they are more likely to approve a deal with little or no change to the initial bid, benefiting bidders' shareholders and at a cost to target shareholders. Hence, we predict that that the offer price adjustment is lower if target directors are retained. In short, our second hypothesis is as follows: *Hypothesis 2. Ex-ante board connections (director retention) will result in a lower adjustment to the initial offer price.*

3.3 Cash payment

Our third hypothesis is about the payment method in mergers and acquisitions. The payment method can have significant impact on both of target and acquirer shareholders' wealth. In an early paper, Huang and Walkling (1987) document that target shareholders gain higher abnormal returns around the takeover announcement if bidder pays in cash rather than with stock. This may be explained by agency costs. Acquirer firm directors may have incentives to use excess cash to empire build in acquisitions, indicating overpayment for the target firms. From the point view of acquirer shareholders, Linn and Switzer (2001) find that acquirer firm shareholders benefit more when payment is made in cash. Cash payment avoids the partial dilution of voting rights for existing shareholders of the bidder.

Another explanation for the choice between cash and stock in M&A is the valuation of bidder stock. Bidders will prefer to use stock when their own stock is overvalued. For instance, Shleifer and Vishny (2003) propose a theory that the choice of the medium of payment is linked with bidder's stock valuation. Payments are made disproportionately in stock when valuations for bidders are high, and in cash when they are low. Examining the bidder's familiarity with target, Eckbo *et al*. (1990) provide evidence that the mix of cash and stock pay is a function of information asymmetry between target and bidders. Acquirers also prefer to make offers in stock when the bidder's stock value is difficult to estimate with accuracy (Wu, 2011). Similarly, Martin (1996) documents that bidders are more likely to offer cash over stock if the value of the target firm is uncertain. We argue that *ex-ante* board connections may motivate a stock rather than cash offer. If *ex-ante* board connections make bidders better informed about the target firm, the need to use cash to reduce uncertainty is reduced. Therefore, *ex-ante* board connections may lead to lower levels of cash payment.

Board retention may also affect the pay method. Firstly, target firm directors may bargain for retention and accept a deal in favour of bidders' shareholders. A lower level of cash payment

may be beneficial for bidders' shareholders, especially when their equity value is uncertain, difficult to assess or overvalued by the market. If target directors bargain to stay on the board of the merged company, they may be willing to accept bids with smaller proportions paid in cash to the benefit of bidding company shareholders and at a cost to target shareholders. Secondly, bidder firms are more likely to offer stock rather than cash if they agree to terms which include retention of target directors. Agency theory suggests that managerial ownership is likely to link the interests of shareholders to that of managers. By offering stock payment, target directors' ownership in the target firm will convert into ownership in the bidder. Hence stock payment aligns the interests of retained target firm directors with those of bidders' shareholders, rather than those of target firm shareholders. Hence, we predict that board retention will result in a lower level of cash payment. The preceding discussion leads us to the following hypothesis:

Hypothesis 3. Ex-ante board connections (director retention) will result in a lower proportion of bid payment in cash.

3.4 Joint effect of ex-ante board connections and director retention

Previous literature seeks to address the impact of board connections and retention on mergers and acquisitions separately (e.g. Qiu *et al.*, 2014; Renneboog and Zhao, 2014). The joint effect of *ex-ante* board connection and retention remains unknown. In our fourth hypothesis we seek to shed light on the impact of combinations of *ex-ante* board connections and retention. The four possible scenarios are as follows: (1) there is an *ex-ante* connection between members of the board of the target and the bidder, and at least one target director is retained after the takeover; (2) there is an *ex-ante* connection and no retention of target directors; (3) no *ex-ante* connection between the bidder and the target boards but at least one member of the target board is retained; (4) no *ex-ante* connection and no directors of the target are retained. The purpose of our scenario analysis based on connection and retention are twofold. First, to get an overall picture of connections and retention, we examine the combined effect of board connections and retention on pay characteristics. Second, we seek to identify a scenario which protects the interests of target shareholders.

In our previous discussion we argue that both *ex-ante* connections and director retention will favour the acquirer firm (but not necessarily their shareholders) at the cost of target shareholders. *Ex-ante* board connections may provide the acquiring board with an information advantage over the target firm, while board retention may motivate target directors to pursuit

personal benefits. Therefore, our expectation is that target shareholders benefit most in the scenario which is free of *ex-ante* board connections and target directors are not retained.

Hypothesis 4. Payment characteristics (takeover premium, offer price adjustment, cash percentage) will be highest when there are no ex-ante board connections and target directors are not retained.

3.5 Board connections and probability of retention

Finally, we examine the link between board connections and the probability of retention. If board connections reduce information asymmetry between target and acquirer directors, the connected target directors may have a better chance of being retained. Two previous studies have provided evidence on this hypothesis. Ishii and Xuan (2014) find that social ties between target and bidder firm directors will lead to a higher probability of retention whilst Renneboog and Zhao (2014) document that the proportion of target directors retained is positively related to board connections. Rather than examining social ties between board members or the proportion of target directors retained, our hypothesis adds to the existing evidence by directly examining whether an *ex-ante* board connections influence retention of any target directors. Thus, we formulate our final hypothesis as follows:

Hypothesis 5. The probability of board retention is higher when there is an ex-ante board connection.

4. RESEARCH METHOD

To test our first three hypotheses, we use the regression model in equations (1):

$$Y_{i,t} = ß_0 + ß_1 \textit{ex-ante}\ \text{Board connections}_{i,t}\ (\text{Director retention}_{i,t}) + \sum ß_2\ \text{Controls}_{i,t} + \sum ß_3\ \text{Industry} + \sum ß_4\ \text{Year} + \varepsilon_{i,t} \quad (1)$$

For equation (1), we use three dependent variables (Y), namely the takeover premium, the adjustment to the initial offer during the bidding process (offer price adjustment) and the proportion of the payment which is paid in cash (cash percentage). We include four explanatory variables relating to *ex-ante* board connections and four explanatory variables relating to retention of directors of the target firm.

Our board connection variables are *ex-ante* board connection, target and bidder CEO *ex-ante* connection, shared directors and proportion of shared directors. Connections come in various forms. For example, Peter Hambro Mining PLC announced a bid for Aricom PLC in 2009.

Peter Hambro, the executive chairman of the bidder, was also the deputy chairman (NED) of the target firm when the bid was announced. We classify this case as an *ex-ante* board connection, since bidder and target firm have a shared director. Another example is provided by Datamonitor PLC, who announced a bid for Ovum PLC in 2006. The bidder CEO, Michael Danson, and target CEO, Christopher Dines, were fellow directors in another company Techmark Research Ltd in the years before the bid. We also classify this case as an *ex-ante* board, since target and bidder CEOs have a direct *ex-ante* connection.

Our target board retention variables are target director retention, target CEO retention, the number of target directors retained, and the proportion of target directors retained. For instance, Rowe Evans Investment PLC announced a takeover of Lendu holding PLC in 2004. After the deal was completed in 2005, all four target firm directors remained on the combined board. We define this case as a case of target director retention and the proportion of target directors retained is 100%.

Our control variables for equation (1) includes other takeover characteristics (friendly, tender offer and same industry) and firm characteristics variables (size, leverage, profitability and market to book ratio). A dummy variable is included for the calendar year of the announcement in addition to dummy variables representing the Fama-French 12 industry classification for the acquirer.

To test our fourth hypothesis, we create four dummy variables as follows: (1) no connection and no retention; (2) no connection but director retention; (3) connected and no retention; and (4) connected and director retention. Each variable indicates a combined effect relating to *ex-ante* board connections and retention. The model is similar with equation (1).

To test our fifth hypothesis, that board connections affect the probability of retention, we use the equation (2):

$$\text{Prob (Director retention}_{i,t}) = ß_0 + ß_1 \textit{ ex-ante} \text{ Board connections}_{i,t} + \sum ß_2 \text{ Controls}_{i,t} + \sum ß_3 \text{ Industry} + \sum ß_4 \text{ Year} + \varepsilon_{i,t} \quad (2)$$

For equation (2) we use two dependent variables indicating the probability of board retention. Target director retention indicates whether any director is retained by the acquirer whilst target CEO retention indicates whether the CEO of the target is retained on the bidder's board in any capacity. The explanatory variables for the probit analysis include variables representing *ex-ante* board connections between the bidder and the target, and target CEOs' *ex-ante* connections to the CEO of the bidder. Besides control variables used in equation (1), we also

add several corporate governance variables (bidder CEO duality, bidder board independence ratio, bidder and target CEO equity incentives and target CEO age) in equation (2). All variables are defined in Table 1.

[Insert Table 1 here]

5. DATA AND SAMPLE DESCRIPTION

The data for this study was collected from three data sources. Data for merger and acquisition transactions was collected from the Securities Data Company (SDC) using Thomson One Banker. Information on *ex-ante* board connections and target director retention was collected from BoardEx. The data for firm characteristics is collected from Thomson DataStream.

Our sample includes all completed merger and acquisition deals announced from the start of 1999 to the end of August in 2015. All acquirer and target firms are UK public listed firms. We exclude transactions in which the deal value is less than £1million. We also restrict the sample to those deals in which the acquirer owned less than 50% of the target shares prior to the acquisition announcement and owned 100% of the target shares after the deal is completed. For *ex-ante* board connections and retention data, we restrict the sample to those companies for which directors' information is fully available in BoardEx for both target and bidder firms.[ii]

After employing the preceding filters, the final sample comprises of 209 observations. The sample size reflects the incomplete nature of information available regarding board connections and retention, especially for smaller target firms. For example, we require all target firm directors' post M&A job information (firm name, post title, start date and tenure). Such information is not available for a number of small firms in the sample.

The sample descriptive statistics are listed in Table 2. For board connection variables, an *ex-ante* board connection when takeover is announced is observed in 15% of sample acquisitions which is a similar proportion to Renneboog and Zhao (2014), whose sample identified 11% of cases with an *ex-ante* connection. At the time of the takeover, connections between CEOs of both target and acquirer firms are identified in 9% of the sample. A further 10% of cases have at least one director serving on both the boards of the target and acquirer firms (Shared directors) when the takeover is announced.

[Insert Table 2 here]

For board retention variables, one third (34%) of bidding firms in the sample retain at least one director after completion of the takeover. Nearly a quarter of target CEOs (23%) in the sample are retained in some capacity by the bidder including some who become CEO of the combined firm. Our sample is comparable to Qiu *et al.* (2014) who document a retention rate for US target CEOs of 31% (688 out of 2198 cases). On average, acquirer firms pay a 4-week premium of 31.80% for target firms and bid adjustments range from -2.16% to 25.20%. The mean and median percentages of the bid paid in cash are 48.48% and 48.62%.

In Table 3, we show the change of retained target CEO pay before and after takeover is completed. Among our cases of retained target CEOs, the average pay before and after takeover are £ 167,000 and £545,000 respectively. Retention is an attractive deal for target firm directors. Both salary and variable pay (bonus and equity grant) increase significantly if the target CEO remains on board. Increased pay creates a strong incentive for target directors to bargain for retention, even at the cost of target firm shareholders.

[Insert Table 3 here]

6. MAIN RESULTS

6.1 Board connections, director retention and takeover characteristics

We present the relationship between board connections, retention and takeover characteristics in Tables 4-6. For each table, we present the results for models of board connections in Panel A whilst director retention is examined in Panel B.[iii] Dependent variables are the takeover premium, offer price adjustment and cash percentage. Independent variables in Panel A are board connection variables, while those in Panel B are board retention variables.

The evidence from Table 4 indicates that takeover premiums are not related with either board connection or board retention variables.[iv] Such results do not support our hypotheses 1.

[Insert Table 4 here]

The adjustment to the initial bid during the bidding process receives limited attention in the literature but is informative since it captures negotiating power between bidder and target firms. In Table 5, we find that the offer price adjustments are negatively related to both board connections and retention variables. For example, in model (4) of Panel A, offer price adjustments are 1.2% lower if CEOs have an *ex-ante* connection which is significant at the 5%

level. This result provides support for our hypotheses 2 that the difference between the initial and final bids will be lower if they have a board connection or target directors are retained.

[Insert Table 5 here]

Our hypotheses 3 tests whether acquirers will pay a lower percentage of the deal value in cash if they have a board connection or target directors are retained. Table 6 shows that the percentage paid in cash is negatively related with both board connection and retention variables. For example, in model (2) of Panel B indicates that the percentage of cash payment will be 17.2% lower if the target has at least one director retained by the bidder.

[Insert Table 6 here]

Our next step is the scenario analysis in hypothesis 4. In Table 7, we show that the scenario of *not connected and not retained* provides the best deal for target shareholders. For instance, the coefficients for *connected and retained, connected and not retained*, and *not connected and retained* in model (3) are -30.03, -17.57 and -16.69 respectively. Each of these coefficients is significant. Only the scenario of *not connected and not retained* results in higher cash payment. The other three scenarios result in lower pay in cash in our models. In an unreported model of the offer price adjustment, in which we use *not connected and not retained* as the sole categorical variable, we find a coefficient of 1.47 (which is significant at the 5% level). This suggests that the final offer price will be 1.47% higher than the initial offer price if there is no *ex-ante* connection and no target directors are retained. Such a result has strong economic significance as well. Considering the average offer price for target firm in our sample is £956 million (£725m×1.32%), the target firm shareholder will gain £14 million from the final offer (£956m×1.47%), if their directors have no *ex-ante* connection with the bidder and no director of the target remains on the merged board after takeover. In short, our scenario analysis indicates that target shareholders may benefit most in the scenario of *not connected ant not retained*.

[Insert Table 7 here]

6.2 Board connections and the probability of retention

Finally, we explore the link between *ex-ante* board connections and the probability of retention. The question here is whether *ex-ante* board connections result in a higher probability of director retention. Renneboog and Zhao (2014) report that an *ex-ante* connected board will lead to more target firm directors joining the combined firm's board after M&A is completed. We extend

their findings in three ways. Firstly, we examine the relationship between the probability of retention of any members of the target board and their *ex-ante* board connections. Secondly, we look at the probability of target CEO retention and connections between CEOs of the target and bidder firms. Thirdly, we examine whether the relation between connection and retention is linear. Our results are shown in Tables 8 & 9.

[Insert Table 8 here]

The dependent variables in Table 8 are retention of any target director (models 1-2), non-CEO retention only (models 3-4) and target CEO retention (models 5-7). The independent variables are *ex-ante* board connections (models 1-4) and target and acquirer CEOs *ex-ante* connections (models 5-7). We also include a set of corporate governance variables (e.g. acquirer board independence ratio, target and acquirer CEO equity incentives) in regressions models.

We find some strong evidence to support our hypothesis 5. Our results indicate that *ex-ante* board connections increase the probability of any target director being retained by the acquirer (models 1-2). However, such a relation is largely driven by CEO retention, because non-CEO retention only is not significant (models 3-4). In addition, *ex-ante* board connections between target and acquirer CEOs also increases the likelihood of target CEO retention at the 5% level in models 5 to 7.

[Insert Table 9 here]

In Table 9, we use the proportion of the target board retained as the dependent variable, and the proportion of shared directors and number of connections as independent variables. We do not find that an increase in the proportion of shared directors or number of connections will result in an increase in the proportion of target directors retained. In short, we conclude that the board connections will increase the likelihood of director retention (Table 8), but such a relation between connection and retention is not linear (Table 9).

6.3 Robustness check

Previous authors, such as Cai and Sevilir (2012) and Qiu et al (2014), have highlighted the potential for endogeneity in CEO retention and takeover premium tests.[v] We follow the approach by Qiu et al. (2014) by using a battery of M&A and board connection and retention variables to reduce the potential for omitted variable bias. They also confirm their results using the Heckman two-stage correction and we follow a Heckman procedure to examine sample selection bias in our data. Finally, Qiu et al. (2014) note that their tests do not perfectly deal

with endogeneity. We argue that since board connections are *ex ante*, they can reasonably be assumed to be independent of payment characteristics given the lost standing relationships involved. Thus, payment characteristics do not lead to the connections in our study. The concern then would be role of director retention. We argue that this is also independent of payment characteristics. Payment characteristics – takeover premium, cash payment and offer price changes – could perhaps be argued to encourage the company to retain board members but that implies a rather simplistic view of the M&A process and any influence on a general model is likely to be small. Instead, a more plausible explanation is the one proposed in this study, which is consistent with the explanation in Renneboog and Zhao (2014).

Heckman (1979) addresses estimation bias that results from the use of non-randomly selected samples. In our study, it is possible that the sample is not randomly selected. More specifically, acquirers may be more likely to approach the target for a deal if they have *ex-ante* board connection. Therefore, our sample of connected and unconnected boards may be not randomly drawn from the general population of merger and acquisition cases. To address such a concern, we follow Qiu *et al*. (2014) and Schmidt (2015) to employ Heckman (1979) two-stage procedure. In the first stage, we use a probit model to structure the selection equations of acquirer and target CEOs' *ex-ante* board connections, as a function of control variables used in tables 4 to 6 plus an additional instrumental variable: *same city*. The instrument equals one if the headquarters of acquirer and target firms are located in the same city and zero otherwise. The variable of *same city* may be a good instrument. Chakrabarti and Mitchell (2013) argue that the distance between acquirer and target will increase the search cost. They find that a firm is more likely to become the target, if it is geographically close to the acquirer. Similarly, Schildt and Laamanen (2006) document that geographic proximity (co-location) will increase the likelihood of mergers or acquisition. Neither of these papers document that the payment characteristics vary with distance between the bidder and the target.

In the second stage, we calculate the inverse Mills ratio using the fitted value from the first stage model, and then add it as an additional control variable in equation (1). Such an inverse Mills ratio is expected to capture the sample selection effect for a given observation. If sample selection bias does not affect the relation between pay characteristics and *ex-ante* board connections, then Lambda, the coefficient of the inverse Mills ratio from the first stage model will be statistically insignificant.

[Insert Table 10 here]

Column (1) of Table 10 shows the first stage of Heckman (1979) two stages procedure, a probit model where dependent variable is acquirer and target CEOs *ex-ante* board connections. Our instrumental variable is positive and significant at 1% level. It suggests that acquirer and target CEOs are more likely to have *ex-ante* board connection if they are headquartered in the same city. Columns (2) and (3) present the second stage of Heckman (1979) two-stage procedure, where dependent variables are offer price adjustment and cash percentage respectively. Those results are consistent with our findings in Tables 6 and 7. Both offer price adjustment and cash percentage are negatively related with acquirer and target CEOs *ex-ante* connections. More importantly, Lambda, the coefficient of inverse Mills ratio calculated from column (1) is not statistically significant, either in column (2) or (3). The implication is that the relation between *ex-ante* board connections and pay characteristics is unlikely to be driven by sample selection bias.[vi]

7. DISCUSSION

Previous studies suggest that board connections may lead to a better deal for acquirer firm, in terms of the takeover premiums and short-term wealth effects after announcement (e.g. Cai and Sevilir, 2012). Such an effect may be due to the improved communication channel and reduction in information asymmetry between target and acquirer firms. Qiu *et al*. (2014) find that another type of board relation, retention of target CEOs on the combined board, will lead to a more favourable deal for acquirer firm. Since target CEOs may bargain for private benefits (e.g. retention on the board after the takeover) at the cost of target shareholders (e.g. lower premium). We extend these results by examining more detailed data on board connections and director retention than previous studies. Since Cadbury Report (1992), the UK has had a different approach to governance to other market-based economies. CEOs who chair the board are almost extinct and thus have less direct power over the decisions of the firm. The most similar paper in a UK context is provided by Renneboog and Zhao (2014), who focus more broadly on takeover success and director networks, include only limited evidence on the proportion of target directors retained.

Previous US studies provide evidence of a negative relationship between board connections (Cai and Sevilir, 2012) and CEO retention (Qiu *et al*., 2014) with the takeover premium. Our results are not consistent with the US results. We do not find a significant relationship between takeover premiums and board connections in the UK. Roll (1986) states that bidder firm CEOs are likely to be overconfident and overpay for the target firm. *Ex-ante* board connections may make bidder directors subject to a familiarity bias and overconfidence, leading to

overestimation of synergy gains and their ability to manage the target firm. Hence, *ex-ante* board connections may not necessarily lead to a lower or higher takeover premium.

We also find no evidence of a significant relationship between takeover premiums and board retention, either in terms of retention of CEOs or other directors in the UK. Bargeron *et al*. (2010) employ data from 1994-2006 and find that CEO retention is not associated with lower takeover premiums in the US. They argue that the decision to retain target CEOs is mainly based on managerial skill rather than willingness accept a lower takeover premium.

One concern with regard to M&A in this context is that target directors may explicitly exploit their position to influence the takeover premium. In an extreme case, agency costs could be introduced by target executives which are then exploited by the bidder. If intentional, such a "long con" would be at best unethical and possibly illegal. However, more realistically, smaller scale agency costs could be introduced by poor decision-making, intentionally or otherwise, with a similar effect. The market for corporate control mechanism would fail to protect target company shareholders from agency costs in such cases and the behaviour of connected target directors who exploit their inside information in takeovers could reasonably be considered as morally arguable. However, our results indicate no such result with respect to the takeover premium, which is consistent with target directors bargaining appropriately, at least on the surface, on behalf of shareholders in the takeover process. This may also point to the limited influence of individual directors and CEO/director retention being motivated by retaining talented managers rather than reduction of the takeover premium (Fich *et al.,* 2014).

However, when we dig deeper, we do uncover evidence of agency costs for target shareholders. Whilst we do not find explicit costs in terms of the takeover premium, we are able to identify that offer price adjustments are lower if bidders have *ex-ante* connections with the target firm or any target firm director is retained. The offer price adjustment will be 1.49% (£14.26m) lower if target firms and bidder firms have shared directors; and 1.55% (£14.83m) lower if target firm CEOs are retained on combined boards. This evidence implies that director retention is used as an incentive by acquirers to encourage target directors to bargain less vigorously on behalf of their shareholders. In addition, we find that the proportion of the deal value paid in cash is negatively related with *ex-ante* board connections and target director retention, echoing findings of previous studies (e.g. Renneboog and Zhao, 2014; Qiu *et al.*, 2014).

In addition to testing the impact of board connections and director retention on pay characteristics separately, to assess the joint effect we conduct a scenario analysis based on different combinations of connection and retention variables. Our results indicate that the best protection of the interests of target company shareholders is provided when there are no *ex-*

ante board connections and no directors of the target company are retained after the takeover. In such a scenario, acquirer firms are willing to pay a higher proportion of the bid in cash, and perhaps more importantly, the increase in the offer price during the bid process is greater. It is also notable that in what might be considered the efficiency scenario, i.e. no *ex-ante* connection but a director is retained, we observe large negative and significant coefficients for the offer price adjustment and the cash percentage indicating suboptimal outcomes for target shareholders in this scenario as well. This evidence of Table 7 provides support for the view that target firm directors are more likely to bargain aggressively on behalf of shareholders if negotiation is conducted at arms-length i.e. they have no connection with the bidder and they do not stay on the board after takeover is completed.

Our final empirical observation is that a positive relationship exists between the probability of target director (or CEO) retention on boards and *ex-ante* board connections. Target directors with *ex-ante* board connections are more likely to be retained on the board after the takeover is completed. Furthermore, target CEOs are more likely to be retained on the combined board if they have an *ex-ante* board connection with the CEO of the bidder.

8. CONCLUSION

We examine the conflict of interest which arises from board connections and director retention between bidder and target companies in mergers and acquisitions and find a material impact on the wealth of target company shareholders. If target firm directors have *ex-ante* board connections with acquirer firms or they are retained on the board by the acquirer, we observe that the adjustment to the offer price in the bid process and the proportion of the deal value paid in cash are lower. In such circumstances, acquirer firm shareholders may benefit at the cost of target firm shareholders. Our analysis of *ex-ante* connection and retention scenarios demonstrates that target shareholders will benefit most if target directors have no connection with bidders and are not retained after takeover is completed.

The evidence presented here suggests that legislation may be appropriate to enhance the operation of the market for corporate control. From a legal point of view, the specific conflict of interest is sufficiently recurrent and detrimental to the minority shareholders of the target company in cases of a change of control that it may warrant an amendment to legal frameworks existing within the UK and elsewhere. To account for the issue at hand, we suggest that a more detailed set of information on *ex-ante* board connections and intended target board retention should be provided by bidders with respect to the offer.

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TABLE 1.

Variables Definitions

Panel A: Board Connection Variables (Independent variables)

Variable Name	Definition	Source
Ex-ante board connections	Dummy variable which takes a value of one if the bidder and target firm have at least one director who has worked on the same board prior to the takeover.	BoardEx
Number of *ex-ante* connection	Number of directors have *ex-ante* connection.	BoardEx
Target & bidder CEOs *ex-ante* connections	Dummy variable which takes a value of one if the CEOs of the bidder and target firm have served on the same board prior to the takeover.	BoardEx
Shared directors	Dummy variable which takes a value of one if the bidder and target firm share at least one director (a director works on both the boards of bidder and target firms) when the takeover is announced.	BoardEx
Proportion of shared directors	The number of shared directors between bidder and target firm scaled by the total number of directors on the board of the bidding firm when the takeover is announced.	BoardEx
Target director retention	Dummy variable which takes a value of one if at least one target firm director retained on the board of the acquirer after takeover is completed.	BoardEx
Target CEO retention	Dummy variable which takes a value of one if the target firm CEO is retained on the board of the bidder after takeover is completed.	BoardEx
Number of target directors retained	Number of target firm directors retained on the board of the bidder after the takeover is completed.	BoardEx
Proportion of target directors retained	Number of target firm directors retained on the board of the bidder after the takeover is completed, scaled by total number of directors on the board of the target firm.	BoardEx
Connected and retained	Dummy variable which takes a value of one if the value of both variables of "*Ex-ante* board connections" and "Target director retention" are one.	BoardEx
Connected and not retained	Dummy variable which takes a value of one if the value of variables of "*Ex-ante* board connections" is one and "Target director retention" is zero.	BoardEx
Not connected and retained	Dummy variable which takes a value of one if the value of variables of "*Ex-ante* board connections" is zero and "Target director retention" is one.	BoardEx

Panel B: M&A transaction variables (Dependent variables)

Variable Name	Definition	Source
Takeover Premium	The price premium (%) of takeover offer price compared with target firm share price 4 weeks before the announcement.	Thomson One Banker
Offer price adjustment	The percentage change of final takeover offer price compared with initial offer price.	Thomson One Banker
Cash Percentage	The percentage of the deal value paid in cash of takeover deal.	Thomson One Banker

Panel C: M&A deal characteristic variables

Variable Name	Definition	Source
Friendly	Dummy variable which takes a value of one if the attitude of takeover is friendly.	Thomson One Banker
Tender Offer	Dummy variable which takes a value of one if the bid is tender offer.	Thomson One Banker
Same Industry	Dummy variable which takes a value of one if acquirer and target firm share the same 2-digit SIC code.	Thomson One Banker

Prior M&A Ownership	Percentage of target firm's share owned by acquirer prior to M&A.	Thomson One Banker

TABLE 1. (Continued)

Panel D: Firm characteristic variables

Variable Name	Definition	Source
Target Size	The natural logarithm of market value of equity of target firm in £m four weeks prior to the deal announcement.	Thomson One Banker
Target MTB	(Target firm's total assets – book value of common equity + market value of common equity), scaled by total assets; measured at the end of the last fiscal year before the deal announcement date.	DataStream
Target Leverage	Target firm's long-term debt scaled by total assets; measured at the end of the last fiscal year prior to the deal announcement date.	DataStream
Target Profitability	Target firm's earnings before extraordinary items scaled by total assets; measured at the end of the last fiscal year before the deal announcement date.	DataStream
Acquirer Size	The natural logarithm of market value of equity of acquirer firm in £m four weeks prior to the deal announcement.	Thomson One Banker
Acquirer MTB	(Acquirer firm's total assets – book value of common equity + market value of common equity), scaled by total assets; measured at the end of the last fiscal year before the deal announcement date.	DataStream
Acquirer Leverage	Acquirer firm's long-term debt scaled by total assets; measured at the end of the last fiscal year before the deal announcement date.	DataStream
Acquirer Profitability	Acquirer firm's earnings before extraordinary items scaled by total assets; measured at the end of the last fiscal year before the deal announcement date.	DataStream

Panel E: Corporate governance variables

Variable Name	Definition	Source
Acquirer CEO duality	Dummy variable which takes a value of one if acquirer CEO is also the chairman or chairwoman.	BoardEx
Acquirer board independent	The number of independent directors (NED) scaled by total number of directors on the board of the acquirer firm.	BoardEx
Acquirer CEO tenure	The log of acquirer CEO tenure in years.	BoardEx
Founder acquirer CEO	Dummy variable which takes a value of one if acquirer CEO is also the founder of the firm.	BoardEx
Acquirer CEO equity incentives	The estimated value of shares, stock options and restricted shares held by the acquirer CEO, scaled by the market value of the acquirer firm.	BoardEx DataStream
Target CEO age	Target CEO age when takeover deal is announced.	BoardEx
Target CEO equity incentives	The estimated value of shares, stock options and restricted shares held by the target CEO, scaled by the market value of the target firm.	BoardEx DataStream
Target CEO duality	Dummy variable which takes a value of one if target CEO is also the chairman or chairwoman.	BoardEx
Target board independent	The number of independent directors (NED) scaled by total number of directors on the board of the target firm.	BoardEx
Target CEO tenure	The log of target CEO tenure in years.	BoardEx
Founder target CEO	Dummy variable which takes a value of one if target CEO is also the founder of the firm.	BoardEx

TABLE 2.

Descriptive Statistics

Table 2 presents descriptive statistics for the sample of 209 completed UK mergers and acquisitions from 1999 to 2015. All variables are defined in Table 1. All variables are winsorized at the 1% level.

Variables	Mean	Min	Med	Max	Std.
Ex-ante board connections (dummy)	0.15	0	0	1	0.36
Number of *ex-ante* connection	0.25	0	0	4	0.86
Target & Acquirer CEOs *ex-ante* connections (dummy)	0.09	0	0	1	0.29
Shared directors (dummy)	0.10	0	0	1	0.29
Proportion of shared directors (%)	2.00	0	0	33.33	6.67
Target director retention (dummy)	0.34	0	0	1	0.48
Target CEO retention (dummy)	0.23	0	0	1	0.42
Number of target directors retained (N)	0.42	0	0	4	0.79
Proportion of target directors retained (%)	6.85	0	0	50.00	12.81
Takeover premium (%)	31.80	-91.37	27.91	248.00	43.34
Offer price adjustment (%)	0.97	-2.16	0	25.20	4.21
Cash percentage (%)	48.48	0	48.62	100	44.45
Friendly (dummy)	0.96	0	1	1	0.20
Tender offer (dummy)	0.78	0	1	1	0.42
Same Industry (dummy)	0.56	0	1	1	0.50
Prior M&A Ownership (%)	1.54	0	0	47.06	6.09
Target Size (£M)	725.38	1.20	47.19	44145.30	3940.50
Target Leverage (%)	12.43	0	5.46	72.48	16.04
Target MTB (ratio)	1.60	0.42	1.29	5.90	0.98
Target Profitability (%)	-5.04	-155.38	1.74	25.40	24.97
Acquirer Size (£M)	2763.93	1.86	341.05	92366.75	10484.30
Acquirer Leverage (%)	14.35	0	9.07	65.25	16.27
Acquirer MTB (ratio)	1.93	0.65	1.53	7.56	1.28
Acquirer Profitability (%)	1.09	-95.30	3.87	26.45	15.99
Acquirer CEO & Chairman duality (dummy)	0.11	0	0	1	0.31
Acquirer independent director ratio (%)	54.50	0	56.56	81.25	13.92
Acquirer CEO equity incentives (%)	2.46	0	0.57	23.72	4.45
Target CEO age	50.32	32.95	50.32	70.71	7.65
Target CEO equity incentives (%)	3.43	0	0.31	38.29	7.78

TABLE 3.

Univariate Analysis for Retained target CEO pay before and after M&A

Table 3 presents the mean compensation for retained target CEOs as executive directors (CEO or non-CEO executive director) after M&A is completed. There are 37 cases of target CEOs retained as executive directors after M&A is completed out of 209 completed UK mergers and acquisitions cases from 1999 to 2015. Statistical significance of differences between means is tested using an independent samples t-test. *, **, *** denote statistical significance at 10%, 5% and 1% level respectively.

Pay component	Before M&A (1)	After M&A (2)	(2)-(1)
Salary	£99,000	£295,000	£196,000***
Variable pay (bonus + equity grant)	£68,000	£250,000	£182,000***
Total pay (Salary + Variable pay)	£167,000	£545,000	£378,000***

TABLE 4.

Board connections, retention and takeover premiums[vii]

Table 4 presents OLS regressions for the sample of 209 completed UK mergers and acquisitions from 1999 to 2015. The dependent variable is the takeover premium. Independent variables in Panel A are board connection variables when the takeover is announced. Independent variables in Panel B are a set of board retention variables after the takeover is completed. All other variables are defined as in Table 1. Fixed effects are included for year and industry (Fama-French 12 industry classifications) but are not reported for brevity. White heteroscedasticity-corrected t-statistics are reported in parentheses. *, **, *** denote statistical significance at 10%, 5% and 1% level, respectively.

Panel A: Board connections when takeover is announced: Dependent = Takeover premium (%)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Ex-ante board connections	6.90	9.77						
	(0.82)	(1.12)						
Target & Acquirer CEOs *ex-ante* connections			5.13	8.29				
			(0.36)	(0.58)				
Shared directors					9.06	11.20		
					(0.69)	(0.84)		
Proportion of shared directors							0.86	0.90
							(1.05)	(1.10)
Ownership prior to M&A		-0.79*		-0.74		-0.73*		-0.72*
		(-1.88)		(-1.64)		(-1.71)		(-1.74)
Friendly	3.92	5.46	3.76	5.09	3.71	5.08	3.41	4.78
	(0.37)	(0.50)	(0.36)	(0.47)	(0.36)	(0.48)	(0.34)	(0.46)
Tender offer	14.93*	13.65*	14.99*	13.87*	15.15*	13.99*	15.58*	14.37*
	(1.92)	(1.77)	(1.90)	(1.77)	(1.91)	(1.78)	(1.94)	(1.80)
Same industry	6.95	6.47	7.18	6.94	7.38	7.1	8.33	7.89
	(1.03)	(0.97)	(1.03)	(1.00)	(1.04)	(1.0)	(1.15)	(1.10)
Target size	-7.99**	-8.33**	-7.8***	-8.03**	-8.18**	-8.51**	-8.61**	-8.9***
	(-2.38)	(-2.47)	(-2.27)	(-2.35)	(-2.46)	(-2.54)	(-2.69)	(-2.76)
Target MTB	-4.25	-4.53	-4.04	-4.17	-4.27	-4.53	-4.27	-4.52
	(-1.29)	(-1.37)	(-1.27)	(-1.32)	(-1.29)	(-1.36)	(-1.32)	(-1.40)
Target leverage	-0.08	-0.11	-0.10	-0.13	-0.08	-0.10	-0.05	-0.08
	(-0.23)	(-0.30)	(-0.27)	(-0.37)	(-0.21)	(-0.29)	(-0.15)	(-0.24)
Target profitability	0.08	0.08	0.07	0.07	0.09	0.09	0.11	0.11
	(0.48)	(0.50)	(0.43)	(0.44)	(0.54)	(0.56)	(0.76)	(0.77)
Acquirer size	7.9***	8.1***	7.9***	8.1***	8.2***	8.4***	8.8***	8.9***
	(3.74)	(3.73)	(3.73)	(3.71)	(3.82)	(3.79)	(3.96)	(3.91)
Acquirer MTB	2.41	2.41	2.41	2.41	2.35	2.34	2.26	2.26
	(0.87)	(0.88)	(0.87)	(0.88)	(0.84)	(0.85)	(0.81)	(0.82)
Acquirer Leverage	-0.01	-0.01	-0.00	-0.01	-0.02	-0.03	-0.05	-0.06
	(-0.01)	(-0.06)	(-0.02)	(-0.06)	(-0.10)	(-0.17)	(-0.26)	(-0.32)
Acquirer profitability	-0.04	-0.02	-0.05	-0.04	-0.04	-0.02	-0.06	-0.04
	(-0.24)	(-0.13)	(-0.28)	(-0.20)	(-0.24)	(-0.14)	(-0.35)	(-0.25)
Constant	-8.47	-8.81	-9.86	-11.35	-10.13	-10.60	-8.47	-13.73
	(-0.31)	(-0.32)	(-0.33)	(-0.38)	(-0.39)	(-0.37)	(-0.31)	(-0.47)
Year & Industry	YES	YES	YES	YES	YES	YES	YES	YES
Adjusted R^2	0.07	0.08	0.08	0.07	0.08	0.08	0.08	0.09

TABLE 4. (Continued)

Panel B: Board retention after takeover is completed: Dependent = Takeover premium (%)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Target director retention	6.50	6.54						
	(0.75)	(0.77)						
Target CEO retention			1.26	1.83				
			(0.18)	(0.27)				
Number of target directors retained					2.78	2.79		
					(0.94)	(0.95)		
Proportion of target directors retained							0.11	0.12
							(0.63)	(0.68)
Ownership prior to M&A		-0.66		-1.66		-0.66		-0.67
		(-1.45)		(-0.48)		(-1.42)		(-1.45)
Friendly	2.52	3.78	3.83	5.08	2.42	3.68	2.65	3.87
	(0.23)	(0.34)	(0.36)	(0.47)	(0.21)	(0.32)	(0.24)	(0.35)
Tender offer	15.83*	14.69*	14.89*	13.81*	17.58*	16.45*	16.41*	15.34*
	(1.92)	(1.79)	(1.87)	(1.75)	(1.91)	(1.79)	(1.85)	(1.73)
Same industry	6.56	6.07	6.71	6.23	6.34	5.85	6.62	6.12
	(0.99)	(0.93)	(1.00)	(0.95)	(0.96)	(0.89)	(1.00)	(0.93)
Target size	-8.45**	-8.66**	-7.83**	-8.1**	-8.9**	-9.1***	-8.18**	-8.41**
	(-2.54)	(-2.60)	(-2.17)	(-2.23)	(-2.71)	(-2.77)	(-2.47)	(-2.53)
Target MTB	-4.38	-4.61	-4.26	-4.51	-4.60	-4.83	-4.38	-4.62
	(-1.30)	(-1.37)	(-1.28)	(-1.35)	(-1.33)	(-1.40)	(-1.29)	(-1.36)
Target leverage	-0.09	-0.11	-0.09	-0.12	-0.10	-0.13	-0.10	-0.13
	(-0.24)	(-0.32)	(-0.26)	(-0.33)	(-0.29)	(-0.38)	(-0.27)	(-0.36)
Target profitability	0.06	0.06	0.06	0.06	0.07	0.06	0.05	0.05
	(0.38)	(0.37)	(0.37)	(0.37)	(0.41)	(0.40)	(0.31)	(0.30)
Acquirer size	8.7***	8.8***	8.0***	8.0***	9.0***	9.05***	8.5***	8.64***
	(4.05)	(4.01)	(3.45)	(3.44)	(4.08)	(4.04)	(3.94)	(3.93)
Acquirer MTB	2.19	2.19	2.45	2.47	2.15	2.16	2.30	2.30
	(0.79)	(0.80)	(0.88)	(0.90)	(0.78)	(0.79)	(0.84)	(0.85)
Acquirer Leverage	-0.01	-0.01	-0.01	-0.02	-0.01	-0.02	0.01	-0.01
	(-0.01)	(-0.06)	(-0.03)	(-0.08)	(-0.04)	(-0.08)	(0.01)	(-0.04)
Acquirer profitability	-0.03	-0.02	-0.04	-0.02	-0.05	-0.03	-0.03	-0.01
	(-0.18)	(-0.09)	(-0.22)	(-0.12)	(-0.27)	(-0.17)	(-0.16)	(-0.06)
Constant	-12.26	-12.06	-7.84	-7.96	-14.46	-14.26	-12.21	-12.25
	(-0.43)	(-0.42)	(-0.29)	(-0.30)	(-0.48)	(-0.70)	(-0.42)	(-0.41)
Years & Industry	YES	YES	YES	YES	YES	YES	YES	YES
Adjusted R^2	0.07	0.07	0.07	0.07	0.08	0.08	0.07	0.07

TABLE 5.
Board connections, retention and offer price adjustment

Table 5 presents OLS regressions for the sample of 209 completed UK mergers and acquisitions from 1999 to 2015. The dependent variable is the percentage change in the offer price adjustment compared with initial offer price. Independent variables in Panel A are board connection variables when the takeover is announced. Independent variables in Panel B are a set of board retention variables after the takeover is completed. All variables are as defined as in Table 1. Fixed effects are included for year and industry (Fama-French 12 industry classifications) but are not reported for brevity. White heteroscedasticity-corrected t-statistics are reported in parentheses. *, **, *** denote statistical significance at 10%, 5% and 1% level, respectively.

Panel A: Board connections when takeover is announced: Dependant = Offer price adjustment (%)

	Dependent Variable: Offer price adjustment (%)							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Ex-ante board connections	-0.31	-0.22						
	(-0.43)	(-0.30)						
Target & Acquirer CEOs *ex-ante* connections			-1.3**	-1.20**				
			(-2.07)	(-2.04)				
Shared directors					-1.49**	-1.44**		
					(-2.24)	(-2.23)		
Proportion of shared directors							-0.06**	-0.06**
							(-2.04)	(-2.04)
Ownership prior to M&A		-0.02		-0.02		-0.02		-0.02
		(-0.77)		(-0.55)		(-0.62)		(-0.07)
Friendly	-7.47**	-7.42**	-7.4**	-7.40**	-7.44**	-7.40**	-7.43**	-7.39**
	(-2.28)	(-2.26)	(-2.29)	(-2.27)	(-2.29)	(-2.20)	(-2.29)	(-2.27)
Tender offer	-0.39	-0.43	-0.45	-0.47	-0.46	-0.48	-0.45	-0.49
	(-0.49)	(-0.52)	(-0.55)	(-0.57)	(-0.56)	(-0.58)	(-0.55)	(-0.58)
Same industry	-1.34**	-1.36**	-1.5**	-1.46**	-1.45**	-1.46**	-1.5**	-1.5**
	(-2.25)	(-2.25)	(-2.33)	(-2.33)	(-2.34)	(-2.33)	(-2.32)	(-2.32)
Target size	0.50*	0.49	0.49*	0.49*	0.56*	0.55*	0.55*	0.54*
	(1.67)	(1.64)	(1.73)	(1.71)	(1.82)	(1.80)	(1.80)	(1.78)
Target MTB	-0.12	-0.13	-0.17	-0.18	-0.12	-0.13	-0.12	-0.13
	(-0.54)	(-0.59)	(-0.77)	(-0.79)	(-0.52)	(-0.56)	(-0.54)	(-0.58)
Target leverage	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
	(-0.73)	(-0.76)	(-0.69)	(-0.70)	(-0.86)	(-0.87)	(-0.84)	(-0.86)
Target profitability	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
	(-0.97)	(-0.96)	(-1.05)	(-1.05)	(-1.21)	(-1.20)	(-1.21)	(-1.21)
Acquirer size	-0.20	-0.20	-0.23	-0.22	-0.27	-0.26	-0.27	-0.27
	(-1.01)	(-0.99)	(-1.13)	(-1.19)	(-1.25)	(-1.23)	(-1.25)	(-1.24)
Acquirer MTB	-0.08	-0.08	-0.07	-0.07	-0.06	-0.06	-0.06	-0.06
	(-0.39)	(-0.39)	(-0.37)	(-0.37)	(-0.32)	(-0.32)	(-0.33)	(-0.33)
Acquirer Leverage	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02
	(0.57)	(0.56)	(0.56)	(0.55)	(0.68)	(0.67)	(0.71)	(0.70)
Acquirer profitability	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	(0.30)	(0.33)	(0.42)	(0.44)	(0.29)	(0.31)	(0.38)	(0.41)
Constant	3.91	3.90	4.55	4.52	4.36	4.35	4.33	4.32
	(0.98)	(0.97)	(1.12)	(1.11)	(1.08)	(1.07)	(1.07)	(1.07)
Years & Industry	YES	YES	YES	YES	YES	YES	YES	YES
Adjusted R^2	0.09	0.06	0.09	0.06	0.10	0.07	0.10	0.07

TABLE 5. (Continued)

Panel B: Board retention after takeover is completed: Dependant = Offer price adjustment (%)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Target director retention	-1.55**	-1.54**						
	(-2.11)	(-2.11)						
Target CEO retention			-1.55**	-1.54**				
			(-2.26)	(-2.23)				
Number of target directors retained					-0.45**	-0.45**		
					(-2.43)	(-2.42)		
Proportion of target directors retained							-0.02**	-0.02**
							(-2.06)	(-2.03)
Ownership prior to M&A		-0.03		-0.02		-0.03		-0.03
		(-0.86)		(-0.70)		(-0.86)		(-0.78)
Friendly	-7.14**	-7.09**	-7.38**	-7.34**	-7.22**	-7.17**	-7.19**	-7.15**
	(-2.24)	(-2.21)	(-2.32)	(-2.29)	(-2.28)	(-2.26)	(-2.25)	(-2.23)
Tender offer	-0.65	-0.69	-0.58	-0.68	-0.85	-0.90	-0.75	-0.79
	(-0.78)	(-0.81)	(-0.70)	(-0.73)	(-0.96)	(-0.99)	(-0.86)	(-0.89)
Same industry	-1.30**	-1.32**	-1.36**	-1.38**	-1.28**	-1.30**	-1.32**	-1.34**
	(-2.24)	(-2.25)	(-2.29)	(-2.30)	(-2.19)	(-2.20)	(-2.24)	(-2.24)
Target size	0.65**	0.64**	0.60**	0.59*	0.68**	0.67**	0.58**	0.57*
	(2.01)	(2.00)	(1.99)	(1.97)	(2.20)	(2.18)	(1.98)	(1.96)
Target MTB	-0.09	-0.10	-0.09	-0.09	-0.07	-0.08	-0.09	-0.10
	(-0.39)	(-0.44)	(-0.39)	(-0.43)	(-0.28)	(-0.33)	(-0.40)	(-0.45)
Target leverage	-0.02	-0.02	-0.02	-0.02	-0.01	-0.02	-0.02	-0.02
	(-0.83)	(-0.86)	(-0.91)	(-0.93)	(-0.67)	(-0.70)	(-0.70)	(-0.74)
Target profitability	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
	(-0.97)	(-0.97)	(-0.66)	(-0.53)	(-1.02)	(-1.03)	(-0.74)	(-0.74)
Acquirer size	-0.41	-0.40	-0.34	-0.34	-0.39*	-0.39*	-0.36	-0.36
	(-1.56)	(-1.55)	(-1.47)	(-1.45)	(-1.70)	(-1.69)	(-1.54)	(-1.53)
Acquirer MTB	-0.02	-0.02	-0.10	-0.10	-0.03	-0.03	-0.05	-0.05
	(-0.09)	(-0.09)	(-0.53)	(-0.53)	(-0.16)	(-0.16)	(-0.24)	(-0.24)
Acquirer Leverage	0.01	0.01	0.02	0.02	0.01	0.01	0.01	0.01
	(0.56)	(0.55)	(0.65)	(0.65)	(0.60)	(0.59)	(0.52)	(0.52)
Acquirer profitability	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	(0.11)	(0.16)	(0.01)	(0.05)	(0.36)	(0.40)	(0.07)	(0.11)
Constant	5.10	5.11	4.85	4.85	5.06	5.07	4.99	4.99
	(1.25)	(1.25)	(1.19)	(1.19)	(1.25)	(1.24)	(1.21)	(1.20)
Years & Industry	YES	YES	YES	YES	YES	YES	YES	YES
Adjusted R^2	0.12	0.08	0.12	0.08	0.12	0.08	0.12	0.07

TABLE 6.
Board connections, retention and cash payment

Table 6 presents OLS regressions for the sample of 209 completed UK mergers and acquisitions from 1999 to 2015. The dependent variable is the percentage of the deal value paid in cash. Independent variables in Panel A are board connection variables when the takeover is announced. Independent variables in Panel B are a set of board retention variables after the takeover is completed. All variables are as defined as in Table 1. Fixed effects are included for year and industry (Fama-French 12 industry classifications) but are not reported for brevity. White heteroscedasticity-corrected t-statistics are reported in parentheses. *, **, *** denote statistical significance at 10%, 5% and 1% level, respectively.

Panel A: Board connections when takeover is announced: Dependent= Cash percentage (%)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Ex-ante board connections	-19.0***	-17.37**						
	(-2.70)	(-2.32)						
Target & Acquirer CEOs *ex-ante* connections			-29***	-27***				
			(-3.11)	(-2.86)				
Shared directors					-27***	-26***		
					(-3.21)	(-3.06)		
Proportion of shared directors							-0.99**	-0.95**
							(-2.57)	(-2.52)
Ownership prior to M&A		-0.46		-0.44		-0.52		-0.62
		(-0.86)		(-0.93)		(-1.10)		(-1.25)
Friendly	-3.13	-2.24	-2.28	-1.48	-2.50	-1.53	-2.50	-1.32
	(-0.17)	(-0.12)	(-0.13)	(-0.09)	(-0.15)	(-0.09)	(-0.15)	(-0.08)
Tender offer	18.1**	17.33**	17.2**	16.51**	17.4**	16.53**	18**	17**
	(2.49)	(2.39)	(2.43)	(2.32)	(2.45)	(2.34)	(2.47)	(2.34)
Same industry	-2.84	-3.02	-4.89	-5.03	-4.21	-4.48	-4.03	-4.41
	(-0.49)	(-0.53)	(-0.84)	(-0.86)	(-0.71)	(-0.76)	(-0.67)	(-0.74)
Target size	-13***	-13***	-13***	-14***	-12***	-13***	-13***	-13***
	(-7.54)	(-7.59)	(-7.70)	(-7.75)	(-6.97)	(-7.07)	(-7.15)	(-7.26)
Target MTB	-1.21	-1.37	-2.36	-2.44	-1.13	-1.32	-1.19	-1.41
	(-0.42)	(-0.48)	(-0.83)	(-0.86)	(-0.39)	(-0.46)	(-0.42)	(-0.49)
Target leverage	-0.12	-0.13	-0.06	-0.08	-0.14	-0.16	-0.12	-0.15
	(-0.65)	(-0.73)	(-0.31)	(-0.42)	(-0.73)	(-0.83)	(-0.65)	(-0.78)
Target profitability	0.3***	0.33***	0.3***	0.33***	0.3***	0.30***	0.3***	0.3***
	(3.38)	(3.39)	(3.40)	(3.41)	(3.03)	(3.06)	(3.05)	(3.06)
Acquirer size	12***	12***	12***	12***	11***	11***	11***	11***
	(7.61)	(7.45)	(7.43)	(7.33)	(6.96)	(6.86)	(6.77)	(6.69)
Acquirer MTB	-2.69	-2.69	-2.63	-2.64	-2.51	-2.52	-2.55	-2.55
	(-1.23)	(-1.22)	(-1.17)	(-1.16)	(-1.13)	(-1.13)	(-1.15)	(-1.15)
Acquirer Leverage	0.04	0.04	0.04	0.03	0.09	0.08	0.10	0.09
	(0.20)	(0.17)	(0.18)	(0.15)	(0.45)	(0.41)	(0.48)	(0.44)
Acquirer profitability	0.26	0.28	0.31	0.31	0.26	0.28	0.28	0.30
	(1.11)	(1.15)	(1.27)	(1.29)	(1.10)	(1.15)	(1.18)	(1.23)
Constant	-0.50	-0.69	11.46	10.57	4.76	4.43	3.11	3.01
	(-0.01)	(-0.02)	(0.35)	(0.32)	(0.14)	(0.13)	(0.09)	(0.09)
Years & Industry	YES	YES	YES	YES	YES	YES	YES	YES
Adjusted R^2	0.28	0.29	0.28	0.30	0.29	0.30	0.28	0.29

TABLE 6. (Continued)

Panel B: Board retention after takeover is completed: Dependent = Cash percentage (%)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Target director retention	-17.2**	-17.2**						
	(-2.14)	(-2.14)						
Target CEO retention			-13.10*	-12.54				
			(-1.65)	(-1.59)				
Number of target directors retained					-7***	-7***		
					(-3.87)	(-3.86)		
Proportion of target directors retained							-0.4***	-0.4***
							(-3.15)	(-3.10)
Ownership prior to M&A		-0.69		-0.65		-0.69		-0.65
		(-1.42)		(-1.28)		(-1.37)		(-1.29)
Friendly	0.59	1.91	-2.37	-1.14	0.54	1.86	1.17	2.90
	(0.03)	(0.10)	(-0.13)	(-0.06)	(0.03)	(0.10)	(0.09)	(0.16)
Tender offer	15.7**	15.55*	16.99**	15.9**	11.69	10.51	12.23	11.19
	(2.14)	(1.97)	(2.26)	(2.21)	(1.57)	(0.38)	(1.64)	(1.47)
Same industry	-1.79	-2.30	-2.34	-2.82	-1.27	-1.78	-1.85	-2.34
	(-0.31)	(-0.40)	(-0.40)	(-0.48)	(-0.23)	(-0.31)	(-0.33)	(-0.41)
Target size	-12***	-12***	-13***	-13***	-11***	-11***	-12 ***	-12***
	(-5.97)	(-6.10)	(-6.77)	(-6.92)	(-5.49)	(-5.61)	(-6.53)	(-6.62)
Target MTB	-0.86	-1.10	-0.94	-1.18	-0.35	-0.59	-0.69	-0.92
	(-0.31)	(-0.40)	(-0.34)	(-0.42)	(-0.13)	(-0.22)	(-0.26)	(-0.35)
Target leverage	-0.10	-0.13	-0.11	-0.14	-0.05	-0.09	-0.07	-0.10
	(-0.55)	(-0.70)	(-0.60)	(-0.73)	(-0.29)	(-0.45)	(-0.36)	(-0.51)
Target profitability	0.4***	0.4***	0.4***	0.4**	0.4***	0.4***	0.4***	0.4***
	(3.59)	(3.57)	(3.86)	(3.84)	(3.63)	(3.62)	(3.91)	(3.90)
Acquirer size	10***	10***	11***	11**	9***	9***	10***	10***
	(5.00)	(4.95)	(6.16)	(6.20)	(5.39)	(5.34)	(5.14)	(5.09)
Acquirer MTB	-2.10	-2.10	-2.96	-2.94	-2.06	-2.05	-2.23	-2.23
	(-1.03)	(-1.02)	(-1.32)	(-1.31)	(-0.99)	(-0.98)	(-1.06)	(-1.06)
Acquirer Leverage	0.05	0.04	0.07	0.06	0.06	0.05	0.03	0.02
	(0.22)	(0.18)	(0.31)	(0.27)	(0.29)	(0.25)	(0.13)	(0.09)
Acquirer profitability	0.23	0.25	0.23	0.25	0.28	0.29	0.21	0.23
	(0.99)	(1.06)	(0.96)	(1.02)	(1.15)	(1.21)	(0.81)	(0.87)
Constant	9.33	9.54	3.90	3.78	13.57	13.79	15.29	15.25
	(0.25)	(0.26)	(0.11)	0.11)	(0.41)	(0.42)	(0.43)	(0.43)
Years & Industry	YES	YES	YES	YES	YES	YES	YES	YES
Adjusted R^2	0.29	0.29	0.29	0.28	0.29	0.31	0.30	0.31

TABLE 7. M&A pay characteristics, board connections and director retention

Table 7 presents OLS regressions for the sample of 209 completed UK mergers and acquisitions from 1999 to 2015. The dependent variables in columns (1) to (3) are takeover premiums, offer price adjustment and cash percentage respectively. All variables are defined as in Table 1. Fixed effects are included for year and industry (Fama-French 12 industry classifications) but are not reported for brevity. *, **, *** denote statistical significance at 10%, 5% and 1% level, respectively.

	Takeover premium (%) (1)	**Offer price adjustment (%)** (2)	**Cash percentage (%)** (3)
Connected and retained	15.58	-1.62*	-30.03***
	(0.76)	(-1.75)	(-2.80)
Connected and not retained	8.47	-0.04	-17.57*
	(1.03)	(-0.04)	(-1.67)
Not connected and retained	5.44	-1.53*	-16.69*
	(0.74)	(-1.87)	(-1.92)
Ownership prior to M&A	-0.78*	-0.02	-0.47
	(-1.82)	(-0.78)	(-0.92)
Friendly	4.19	-7.09**	1.11
	(0.37)	(-2.21)	(0.06)
Tender offer	14.57*	-0.69	14.45*
	(1.79)	(-0.81)	(1.97)
Same industry	6.36	-1.33**	-2.73
	(0.94)	(-2.23)	(-0.47)
Target size	-8.93***	0.65*	-11.47***
	(2.69)	(1.94)	(5.94)
Target MTB	-4.68	-0.10	-1.11
	(-1.33)	(-0.43)	(-0.40)
Target leverage	-0.10	-0.02	-0.16
	(-0.28)	(-0.85)	(-0.84)
Target profitability	0.08	-0.01	0.33***
	(0.51)	(-0.97)	(3.43)
Acquirer size	8.81***	-0.40	9.84***
	(4.04)	(-1.51)	(4.92)
Acquirer MTB	2.19	-0.02	-2.10
	(0.79)	(-0.09)	(-1.02)
Acquirer Leverage	-0.01	0.01	0.03
	(-0.06)	(0.55)	(0.15)
Acquirer profitability	-0.01	0.01	0.25
	(-0.07)	(0.16)	(1.07)
Constant	-12.63	5.09	13.56
	(-0.46)	(1.26)	(0.37)
Years & Industry	YES	YES	YES
Adjusted R^2	0.07	0.07	0.30
Wald Test (coefficients restriction)	Difference between coefficients (t stat)	Difference between coefficients (t stat)	Difference between coefficients (t stat)
Null : Coefficient of Connected and retained = Coefficient of Connected and not retained	7.11 (0.03)	-1.58 (-0.87)	-12.46 (-0.98)
Null : Coefficient of Connected and retained = Coefficient of Not connected and retained	10.14 (0.14)	-0.09 (-0.14)	-13.34 (-1.36)
Null : Coefficient of Connected and not retained = Coefficient of Not connected and retained	3.03 (0.26)	1.49 (0.22)	-0.88 (-0.08)

TABLE 8.
Board connections and the probability of board retention

Table 8 presents probit regressions for the sample of 209 completed UK mergers and acquisitions from 1999 to 2015. The dependent variables are dummy variables which take a value of one if a target director or the CEO remains on the combined board after the takeover is completed. All variables are as defined as in Table 1. Fixed effects are included for year and target industry (Fama-French 12 industry classifications) but are not reported for brevity. Clustered robust standard errors are estimated using acquirer industry. Z-statistics are reported in parentheses. *, **, *** denote statistical significance at 10%, 5% and 1% level, respectively.

	Any target director retention		Only Non-CEO target director retention		Target CEO retention		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Ex-ante board connections	0.77***	0.76***	0.04	0.03			
	(3.12)	(3.09)	(0.12)	(0.09)			
Target & Acquirer CEOs *ex-ante*					0.97**	1.01**	0.97**
					(2.22)	(2.25)	(2.1)
Friendly	0.48	0.43			0.23	0.14	0.14
	(0.75)	(0.71)			(0.33)	(0.20)	(0.21)
Tender offer	-0.60**	-0.63**	-0.30	-0.29	-0.57*	-0.57*	-0.63**
	(-2.01)	(-2.02)	(-0.87)	(-0.9)	(-1.9)	(-1.93)	(-2.29)
Same industry	0.14	0.09	0.43	0.42	0.01	-0.04	-0.04
	(0.48)	(0.29)	(1.22)	(1.20)	(0.02)	(-0.13)	(-0.14)
Target size	0.00**	0.00**	0.00	0.00	0.00***	0.00***	0.00***
	(2.44)	(2.42)	(1.09)	(1.04)	(3.38)	(3.29)	(3.52)
Target MTB	0.09	0.10	-0.15	-0.15	0.17	0.17	0.16
	(0.60)	(0.61)	(-0.65)	(-0.63)	(1.25)	(1.27)	(1.16)
Target Leverage	0.00	0.00	0.01	0.01	-0.01*	-0.01*	-0.01
	(0.15)	(0.26)	(0.80)	(0.80)	(-1.84)	(-1.80)	(-1.29)
Target probability	0.00	0.01	-0.01**	-0.01**	0.02**	0.02**	0.02**
	(0.94)	(1.02)	(-2.19)	(-2.30)	(2.38)	(2.36)	(2.43)
Acquirer size	-0.00***	-0.00**	0.00	0.00	-0.00***	-0.00***	-0.00***
	(-2.71)	(-2.54)	(-1.39)	(-1.12)	(-3.92)	(-3.76)	(-3.89)
Acquirer MTB	0.09	0.07	0.29***	0.29***	-0.23**	-0.23**	-0.24**
	(0.87)	(0.64)	(2.89)	(2.79)	(-2.13)	(-2.22)	(-2.11)
Acquirer leverage	-0.01*	-0.01	-0.03**	-0.03**	0.00	0.00	0.00
	(-1.69)	(-1.53)	(-2.56)	(-2.52)	(0.04)	(0.12)	(0.02)
Acquirer profitability	-0.01	-0.01	-0.00	0.00	-0.02***	-0.02***	-0.02***
	(-1.40)	(-1.53)	(-0.17)	(-0.18)	(-2.76)	(-2.76)	(-3.12)
Acquirer CEO & Chairman duality		0.01		-0.05		0.14	0.15
		(0.02)		(-0.16)		(0.73)	(0.63)
Acquirer independent director ratio		-0.02**		0.00		-0.02*	-0.02*
		(-2.36)		(-0.75)		(-1.95)	(-1.85)
Acquirer CEO equity incentives		-0.01		0.00		-0.03	-0.03
		(-0.53)		(-0.09)		(-1.33)	(-1.21)
Target CEO age (log)							0.01
							(0.32)
Target CEO equity incentives							0.03
							(1.04)
Constant	-0.39	1.03	-2.70***	-2.42***	-4.48***	-3.40***	-4.29***
	(-0.53)	(1.05)	(-3.98)	(-2.65)	(-4.34)	(-2.63)	(-2.97)
Years & Industry	YES	YES	YES	YES	YES	YES	YES
Pseudo R^2	0.31	0.33	0.30	0.30	0.33	0.35	0.36

TABLE 9.
Board connections and proportion of board retained

Table 9 presents OLS regressions for the sample of 209 completed UK mergers and acquisitions from 1999 to 2015. The dependent variable is proportion of target firm director retention (%). All variables are defined as in Table 1. Fixed effects are included for year and industry (Fama-French 12 industry classifications) but are not reported for brevity. *, **, *** denote statistical significance at 10%, 5% and 1% level, respectively

	(1)	(2)	(3)	(4)
Proportion of shared directors	-0.22	-0.05		
	(-0.88)	(-0.06)		
Proportion of shared directors ^		-0.01		
		(-0.20)		
Number of *ex-ante* connections			-1.04	0.42
			(-0.62)	(0.11)
Number of ex-ante connections ^				-0.24
				(-0.61)
Friendly	10.08	10.08	9.97	9.98
	(0.14)	(1.47)	(1.45)	(1.43)
Tender offer	-15.20***	-15.22***	-15.27***	-15.43
	(-3.21)	(-3.21)	(-3.16)	(-3.21)
Same industry	-0.38	-0.38	-0.16	-0.14
	(-0.11)	(-0.11)	(-0.05)	(-0.04)
Target Size	4.01***	4.00***	3.89***	3.85***
	(3.21)	(3.19)	(3.13)	(3.08)
Target MTB	1.28	1.26	1.26	1.24
	(0.74)	(0.73)	(0.73)	(0.71)
Target leverage	0.01	0.01	0.01	0.01
	(0.06)	(0.06)	(0.09)	(0.09)
Target probability	0.07	0.07	0.08	0.08
	(1.12)	(1.11)	(1.21)	(1.24)
Acquirer size	-6.58***	-6.60***	-6.38***	-6.33***
	(-5.58)	(-5.57)	(-5.52)	(-5.38)
Acquirer MTB	1.06	1.05	0.99	0.99
	(1.00)	(0.98)	(0.93)	(0.92)
Acquirer leverage	-0.04	-0.03	-0.04	-0.05
	(-0.39)	(-0.37)	(-0.48)	(-0.52)
Acquirer profitability	-0.13	-0.13	-0.14	-0.14
	(-0.94)	(-0.91)	(-0.98)	(-0.98)
Acquirer CEO & Chairman duality	0.25	0.25	0.36	0.33
	(0.04)	(0.04)	90.06)	(0.06)
Acquirer independent director ratio	-0.20	-0.20	-0.20	-0.20
	(-1.21)	(-1.23)	(-1.22)	(-1.22)
Acquirer CEO equity incentives	-0.50	-0.51	-0.50	-0.50
	(-1.57)	(-1.58)	(-1.57)	(-1.55)
Constant	62.35***	62.40***	61.97***	61.43***
	3.56	(3.54)	(3.51)	(3.43)
Years & Industry	YES	YES	YES	YES
Adjusted R^2	0.33	0.33	0.33	0.33

TABLE 10.
Heckman correction model

Table 10 presents the results of Heckman (1979) two stages correction procedure. The sample consists of 209 completed UK mergers and acquisitions from 1999 to 2015. Column (1) presents the first stage of Heckman (1979) procedure, a probit model where dependent variable is Target & Acquirer CEOs *ex-ante* connection. Columns (2) and (3) present the second stage of Heckman (1979) procedure, where dependent variables are offer price adjustment and cash percentage respectively. Lambda is the coefficient of inverse Mills ratio calculating from column (1). White heteroscedasticity-corrected t-statistics are reported in parentheses. *, **, *** denote statistical significance at 10%, 5% and 1% level, respectively.

Dependent Variable:	Target & Acquirer CEOs *ex-ante* board connections	Offer price adjustment (%)	Cash percentage (%)
	(1)	(2)	(3)
Target & Acquirer CEOs *ex-ante* connections		-1.19**	-29.96***
		(-2.58)	(-3.43)
Same city	0.84***		
	(2.63)		
Lambda		-0.02	1.46
		(-0.24)	(0.90)
Friendly		-7.26**	3.06
		(-2.08)	(0.19)
Tender offer	-0.12	-0.11	17.41***
	(-0.38)	(-0.14)	(2.87)
Same industry	-0.81***	-0.98*	-9.33
	(-2.78)	(-1.80)	(-1.46)
Target size	-0.01	0.37	-13.20***
	(-0.11)	(1.51)	(-7.96)
Target MTB	-0.43**	-0.26	-6.66**
	(-2.01)	(-0.90)	(-2.36)
Target Leverage	0.01	-0.01	0.05
	(0.67)	(-0.61)	(0.29)
Target profitability	-0.01	-0.01	0.34***
	(-1.35)	(-0.19)	(3.19)
Acquirer size	-0.15*	-0.22	10.76***
	(-1.78)	(-1.16)	(6.47)
Acquirer MTB	-0.01	0.04	-3.60*
	(-0.09)	(0.26)	(-1.72)
Acquirer leverage	-0.01	0.01	0.01
	(-0.20)	(0.62)	(0.07)
Acquirer profitability	0.01	0.01	0.35
	(1.58)	(0.25)	(1.57)
Constant	0.59	9.66**	38.14
	(1.01)	(2.40)	(1.49)
Years & Industry	YES	YES	YES
Adjusted R^2	N/A	0.03	0.04
McFaden R^2	0.19	N/A	N/A

Appendix 1

Board connections, retention and M&A Characteristics (without "non-friendly" takeovers)

This table is replicatesTables 4-6 in the main document. The main purpose is to eliminate the effect of "non-friendly" takeovers. We exclude all "non-friendly" observations and exclude the variable "friendly" from the regression. The sample size drops from 209 to 200.

	Takeover premium (%)		Offer price adjustment (%)		Cash percentage (%)	
	(1)	(2)	(3)	(4)	(5)	(6)
Ex-ante board connections	9.81		-0.93**		-20.54***	
Target director retention		9.78		-1.13*	-0.39	-21.59***
Ownership prior to M&A	-0.83*	-0.70	-0.02	-0.03	19.54	-0.67
Tender offer	12.83	15.06*	0.09	-0.16	-3.28***	14.65*
Same industry	7.56	7.31	-1.01	-0.99*	-13.78	-2.78
Target size	-7.59	-8.09**	0.59	0.65**	-0.69***	-12.62***
Target MTB	-4.55**	-4.71	-0.03	-0.01	-0.08	-0.33
Target leverage	-0.10	-0.11	-0.01	-0.01	0.35	-0.06
Target profitability	0.09	0.07	-0.01	0.00	12.44***	0.39***
Acquirer size	7.52***	8.61***	-0.24	-0.37*	-3.36***	10.01***
Acquirer MTB	3.25	2.99	0.01	0.04	0.08	-2.77
Acquirer Leverage	-0.04	-0.03	0.02	0.02	0.29	0.07
Acquirer profitability	-0.02	-0.01	0.00	0.01	-0.39	0.27
Constant	-2.78	-12.25	-3.27	-2.15	0.98	22.05
Years & Industry	YES	YES	YES	YES	YES	YES
N	200	200	200	200	200	200
Adjusted R^2	0.05	0.05	-0.06	-0.05	0.32	0.33

[i] There may be other pecuniary benefits associated with board connections which are unobservable in our sample.

ii We also examine a control variable for ownership prior to the M&A in regressions (Tables 4-6). This variable is weakly significant in columns (2), (6) and (8) of Panel A in Table 4 only. This suggests that a higher level of ownership prior to the M&A will lead to a lower takeover premium, which is consistent with our expectation. However, with or without this control variable, the significance of our explanatory variables for connections and retention remains unchanged in Tables 4-6.

iii In unreported tests, we employ univariate analysis to confirm that takeover premium, offer price adjustment and cash percentage are lower on average for the sample of retained target directors, compared with the sample of no directors retained.

iv We use the takeover premium based on the stock price four weeks prior to the initial bid as the dependent variable. Results are not materially altered when we estimate the premium using stock prices one week prior or one day prior to the takeover.

v Directors holdings may also be relevant to our study. In our view, such holdings do not influence connections or the desire for retention but may influence the bargaining by the directors. The influence would therefore be detected through an opposite finding to the one we have in our study. We find a negative influence of retention for target shareholders which is not confounded by the endogenous nature of director retention. It may reasonably be argued that if directors' holdings increase bargaining on behalf of their shareholders then our evidence indicates that the influence of retention would be greater than we identify. In the UK, such holdings would only be expected to be large for a very small number of observations in our sample and CEOs can be expected to have much higher holdings than other directors. For example, in Iona & Leonida (2016), the median value for CEO holdings is 2.68% and only 0.17% for non-CEOs.

vi As an additional robustness check, we estimated models without cases of "friendly = 0". The results are shown in Appendix 1. The total number of observations falls in this specification from 209 to 200. Results remain materially unchanged in these models which exclude "unfriendly" takeovers.

vii We have three observations with extreme negative premium (-91.37%) in full sample. To check the robustness, we exclude those three observations and replicate regressions in Table 4. The results remain unchanged. There is no relation between premium and connections & retention.